

Date: September 4, 2018

To: John Grathwol, NYSDEC  
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Katie Dixon, Powerhouse Environmental Arts Foundation  
Paul Parkhill, Gemini Arts Initiative, Inc.

Subject: **Second Quarter 2018 Progress Report  
For the period from March 30 through July 31, 2018  
BRT Powerhouse Site BCP #C224099/ EPA Consent  
Order #CERCLA-02-2017-2021  
153 2<sup>nd</sup> Street, Brooklyn, New York**

The following is a summary of work performed at the above referenced Site located at 153 2<sup>nd</sup> Street in Brooklyn, New York from March 30 through July 31, 2018 following Certificate of Completion (COC), dated December 29, 2017 under the New York State Department of Environmental Conservation Brownfield Cleanup Program (BCP). This period covered by this progress report has been extended to include all onsite activities completed in the month of July. All Site activities have been performed in accordance with the NYSDEC approved Site Management Plan (SMP), dated December 2017. This progress report was prepared to satisfy reporting requirements included in both the NYSDEC-approved SMP and the Draft United States Environmental Protection Agency (USEPA) Sampling Plan, dated June 2017<sup>1</sup> which was attached to the June 2017 Administrative Settlement Agreement and Order on Consent for a Removal Action entered among the USEPA and Gemini Arts Initiative, Inc and BRT Powerhouse LLC (EPA Order).

## Work completed in the second quarter of 2018 includes:

### 1. Monthly Monitoring Well Gauging and Product Recovery:

Onsite monitoring wells were gauged monthly to monitor groundwater and Light Non-Aqueous Phase Liquid (LNAPL), as needed. During demolition work in the interior of the turbine hall basement, all interior wells with the exception of MW-1 and MW-7, were destroyed. Destroyed monitoring wells, MW-2, MW-3, MW-4, MW-5 and MW-6, were gauged in April and May during the second quarter prior to demolition activities.

Three (3) of the nine (9) monitoring wells in the gauging network exhibited LNAPL during this reporting period. LNAPL was consistently observed in monitoring well MW-3, located in the turbine hall basement, at a thickness ranging from 0.17 to 0.52 ft. Approximately 0.675 gallons of product was recovered from MW-3 during the second quarter of 2018. LNAPL was also observed in MW-7 from trace to 0.09 ft in thickness and trace LNAPL was observed in MW-6. Manual recovery, including bailing and absorbent socks were used to recover LNAPL in MW-3, MW-6, and MW-7. A summary of the gauging and product recovery is provided on Table 1.

### 2. Supplemental Boiler House Waste Characterization

Additional waste characterization samples were collected from soil overlying the historical boiler house slab, for disposal purposes. Three test pits were completed to 6 ft bls. Two samples (BH-4 and BH-7)

<sup>1</sup> USEPA provided comments to the BRT Powerhouse Sampling Plan on July 19, 2017. Roux submitted the Response to USEPA BRT Powerhouse Sampling Plan Comments to USEPA on August 29, 2017.

were collected for extractable petroleum hydrocarbons (EPH) analysis and one sample (BH-9) was collected for EPH and toxicity characteristic leachate process (TCLP) Chlordane analysis. Excavation of soil overlying the historical boiler house slab is expected to begin in August of 2018.

All excavated soil was backfilled into each respective test pit to 2 ft bls. The soil cover system was then repaired with a delineation layer, 1.5 feet of clean soil, and 0.5 feet of clean stone to grade, in accordance with the NYSDEC approved SMP.

3. Soil Import for Load Test:

As approved by the NYSDEC via email on July 5, 2018, material from Steiner Studios Kent Avenue Stages 25-30 (source Site) located at the Brooklyn Navy Yard in Brooklyn, New York was transported by truck to BRT Powerhouse under a Beneficial Use Determination (BUD) to allow the use of excavated soil materials in place of virgin materials for load testing of the existing building's mat foundations at the Site. To date, 116 loads (approximately 2,320 cubic yards) of soil were imported onsite and stockpiled to be used for load testing activities. Material is stockpiled on and covered with poly-sheeting. Following the completion of the load test, this material will be used to restore grades that were affected by prior remedial excavation and will be covered by two feet of soil meeting restricted residential soil cleanup objectives (SCOs) or placed beneath the roadways, structures, or pavement.

4. Additional Soil Sampling and Monitoring Well Installation:

On July 20 and July 26 through 27, 2018 additional monitoring wells were installed, as required under the SMP, to further evaluate groundwater quality throughout the Site. Monitoring wells MW-10, MW-11, MW-16, MW-17 and MW-18 were installed as shown on Figure 1. All wells were developed following installation. Groundwater sampling is scheduled to be completed at least one week after installation to allow wells to reach equilibrium with surrounding aquifer.

As requested by the USEPA, additional soil sampling was completed adjacent to the 1<sup>st</sup> Street Basin, along the northern border of the Site during the monitoring well installation activities. Soil samples were collected from the two borings associated with monitoring wells MW-16 and MW-17. Both borings were completed to an elevation of -17.5 ft NAVD 88, to align with proposed dredging depths of the canal. Three soil samples were collected from each boring and analyzed for:

- Part 375 Volatile Organic Compounds (VOCs);
- Part 375 Semi-Volatile Organic Compounds (SVOCs);
- Part 375 Metals;
- Total Cyanide;
- Trivalent/Hexavalent Chromium;
- Part 375 Pesticides;
- Part 375 Herbicides; and
- Polychlorinated Biphenyls (PCBs).

Soil sample and groundwater results will be provided in a separate report, pending receipt of final laboratory analytical results.

5. Turbine Hall Vault Demolition

Darcon Construction Corporation (Darcon) completed demolition of above ground vaults located in the turbine hall basement. A CAT 320E excavator with a hammer extension was utilized for vault demolition. The interior of the vaults contained fill material including soil, metal, concrete, debris, etc. All fill material and concrete generated during demolition activities was stockpiled outside of the turbine hall, along the north border of the Site, on and covered with poly-sheeting. Approximately 200 cubic yards (CY) of fill material and concrete from the south vault and approximately 120 CY of concrete and fill material from

the north vault is stockpiled onsite. Dust mitigation measures were taken by spraying water continuously on the vault as demolition was being completed. One concrete sample and one soil sample from each vault was collected and submitted for analysis. Concrete samples were analyzed for PCBs and polycyclic aromatic hydrocarbons (PAHs), per disposal facility requirements and interior fill material was analyzed for:

- VOCs;
- SVOCs;
- Pesticides;
- PCBs;
- Metals;
- Mercury;
- Extractable Petroleum Hydrocarbons (EPH);
- Percent Moisture;
- Paint Filter;
- TCLP VOCs;
- TCLP SVOCs; and
- TCLP Metals.

During the sampling process the north vault was referred to as "Vault-C" and the southern vault as "Vault-I". Vault concrete samples yielded PCB results of 0.089 ppm for the north vault (Vault-C) and 0.14 ppm for the south vault (Vault-I). Vault interior fill material samples yielded PCB results of 17 ppm for the north vault (Vault-C) and 2.0 ppm for the south vault (Vault-I). Material will be disposed of offsite pending final disposal facility acceptance.

#### 6. Turbine Hall Topping Slab Demolition

Demolition of concrete topping slab (which was observed to be 4 to 9 inches thick) was completed in the turbine hall basement. All topping slab material was stockpiled outside of the turbine hall, on and covered with poly-sheeting. A sample ("Top\_Slab-C") was collected and submitted for analysis. Top\_Slab-C is representative of the entire topping slab; approximately 250 CY of concrete. The concrete topping slab sample yielded a PCB result of 0.079 ppm). Material will be disposed of offsite pending final disposal facility acceptance.

#### 7. Sand Leveling Course Sampling

Once the concrete topping slab was removed, the underlying sand leveling course was exposed. The turbine hall basement was divided into three grids (from west to east, LC-1, LC-2 and LC-3) to ensure that at least one composite sample was collected per every 500 cubic yards of material in the leveling course. Signs of impact (i.e., staining, odor) were observed in the sand leveling course in the northwest corner of the building. To segregate the impacted soil, LC-1 was divided in half (north and south). The south section remained LC-1 and the north section (representing the impacted northwest area), was identified as LC-4.

The waste characterization samples for LC-1, LC-2, and LC-3 were comprised of a 5-point composite from each grid. Waste characterization sample LC-4 was comprised of a 2-point composite: one point from a representative location within the LC-4 section and one point from stained soil stockpiled from the partial excavation of the entrance ramp also within LC-4. Soil for these in-place waste characterization samples were collected just above the mat slab by either digging down through the leveling course using mechanical means (excavator, skid steer, etc.) or by hand using a shovel. In addition, the five sample locations comprising the LC-1 composite waste characterization sample (LC-1a through LC-1e) were

individually analyzed for PCBs. All waste characterization samples were analyzed for the same waste characterization parameters as the turbine hall vault fill material listed above.

Grid LC-1, and LC-2 analytical yielded results greater than 50 ppm, grid LC-3 yielded results less than 50 ppm, and LC-4 yielded results greater than 500 ppm. Sand leveling course sample locations and PCB results are shown on the attached Figure 2. Following receipt of the sand leveling course waste characterization results, further delineation samples were collected to the east (LC-4-NE, LC-4-E and LC-4-SE) and to the south (LC-1a-W) of LC-4 on July 18, 2018, using hand tools, to delineate the extent of PCB concentrations greater than 500 ppm in grid LC-4. Evaluation of disposal facilities for sand leveling course and topping slab is also being completed.

Based on elevated levels of PCBs (i.e. greater than 50ppm) found in the sand leveling course, work has stopped in the interior of the turbine hall to allow for health and safety plan modifications. During topping slab removal, a void with a metal collar was observed in the sand leveling course. Upon review of historical information, the location of the void may be associated with sumps that were part of the turbine hall operations. Potential locations of eight historical sumps are shown on Figure 1. During this pause in interior work, Roux is working toward creating an investigation plan to uncover and inspect potential historical sumps to determine if they may represent sources of oil contamination.

A general schedule of work to be completed in the next 6-month time frame is outlined below. Please note that some items are based on the redevelopment plans provided by the Site General Manager (GM) and actual start dates may vary based on unforeseen redevelopment delays.

Time Frame	Work to be Completed
3 <sup>rd</sup> Quarter (August 2018 – September 2018)	<ul style="list-style-type: none"><li>• Turbine hall historical sump investigation</li><li>• Quarterly groundwater sampling</li><li>• Boiler house excavation</li><li>• Boiler house ground improvements</li><li>• Boiler house load test</li><li>• Turbine hall sand leveling coarse removal</li><li>• Continue monthly gauging and product recovery</li><li>• Turbine hall mat slab sampling</li><li>• Turbine hall ground improvement</li><li>• Begin turbine hall load test</li></ul>
4 <sup>th</sup> Quarter (October 2018-December 2018)	<ul style="list-style-type: none"><li>• Complete turbine hall load test</li><li>• Continue monthly gauging and product recovery</li><li>• Continue quarterly groundwater sampling</li><li>• Submit turbine hall interior mitigation plan</li><li>• Submit vapor intrusion sampling plan</li><li>• Complete USEPA soil borings and monitoring well installation along west side of Site</li></ul>

Please do not hesitate to contact us if you would like to discuss any of these upcoming work items further.

**Second Quarter 2018 Progress Report**  
**March 30 through July 31, 2018**  
***BRT Powerhouse Site***

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**TABLE**

1. Monthly Gauging and Bailing

**Table 1: Monthly Gauging and Bailing**  
**Gowanus Village I LLC, Brooklyn, New York**

<u>Well ID</u>	<u>Date</u>	<u>Well</u>	<u>DTW (ft)</u>	<u>DTP (ft)</u>	<u>Corrected Groundwater</u>	<u>Product Thickness</u>	<u>Gallons of</u>	<u>Notes</u>
		<u>Elevation (ft)</u>			<u>Elevation</u>	<u>(ft)</u>	<u>Product</u> <u>Removed</u>	
MW-1	4/6/2018	6.77	5.68	ND	1.09	--	--	
MW-1	4/12/2018	6.77	5.4	ND	1.37	--	--	
MW-1	5/1/2018	6.77	5.56	ND	1.21	--	--	
MW-1	5/10/2018	6.77	5.42	ND	1.35	--	--	
MW-1	5/22/2018	6.77	5.22	ND	1.55	--	--	
MW-1	7/16/2018	6.77	4.39	ND	2.38	--	--	
MW-2	4/6/2018	6.85	5.8	ND	1.05	--	--	
MW-2	4/12/2018	6.85	5.61	ND	1.24	--	--	
MW-2	5/1/2018	6.85	5.5	ND	1.35	--	--	
MW-2	5/10/2018	6.85	5.68	ND	1.17	--	--	
MW-2	5/22/2018	6.85	6.16	ND	0.69	--	--	
MW-2	7/16/2018	6.85	4.94	ND	1.91	--	--	
MW-3	4/6/2018	6.9	6.2	5.68	1.18	0.52	0.125	Recovered 0.125 gallons via bailer
MW-3	4/12/2018	6.9	6.29	5.89	0.98	0.40	0.1	Recovered 0.1 gallons via bailer
MW-3	5/1/2018	6.9	5.61	5.22	1.65	0.39	0.1	Recovered 0.1 gallons via bailer, placed absorbent sock in well
MW-3	5/10/2018	6.9	5.96	5.71	1.17	0.25	0.25	Recovered 0.25 gallons via bailer/absorbent sock
MW-3	5/22/2018	6.9	6.41	6.24	0.65	0.17	0.1	Recovered 0.1 gallons via bailer
MW-4	4/6/2018	7.17	4.8	ND	2.37	--	--	
MW-4	4/12/2018	7.17	4.93	ND	2.24	--	--	
MW-4	5/1/2018	7.17	4.79	ND	2.38	--	--	
MW-4	5/10/2018	7.17	4.85	ND	2.32	--	--	
MW-4	5/22/2018	7.17	5.04	ND	2.13	--	--	
MW-5	4/6/2018	NM	5.6	ND	NM	--	--	
MW-5	4/12/2018	NM	5.32	ND	NM	--	--	
MW-5	5/1/2018	NM	5.37	ND	NM	--	--	
MW-5	5/10/2018	NM	5.29	ND	NM	--	--	
MW-5	5/22/2018	NM	5.05	ND	NM	--	--	
MW-6	4/6/2018	NM	5.1	5.1	NM	Trace	--	
MW-6	4/12/2018	NM	5.11	ND	NM	--	--	Placed absorbent sock in well: 75% sock full
MW-6	5/1/2018	NM	4.78	ND	NM	--	--	Absorbent sock remains in well - 10% saturation
MW-6	5/10/2018	NM	5.02	ND	NM	--	--	
MW-6	5/22/2018	NM	4.46	ND	NM	--	--	
MW-7	4/6/2018	NM	5.5	5.5	NM	Trace	--	
MW-7	4/12/2018	NM	5.25	5.24	NM	Trace	--	Placed absorbent sock in well
MW-7	5/1/2018	NM	5.67	6.24	NM	--	--	Replace absorbent sock - 75% saturation
MW-7	5/10/2018	NM	5.09	5.07	NM	0.02	--	Recovered product using absorbent sock
MW-7	5/22/2018	NM	5.23	5.22	NM	Trace	--	Recovered product using absorbent sock
MW-7	7/16/2018	NM	4.6	4.51	NM	0.09	--	
MW-8	4/6/2018	NM	3.92	ND	NM	--	--	
MW-8	4/12/2018	NM	4.11	ND	NM	--	--	
MW-8	5/1/2018	NM	3.83	ND	NM	--	--	
MW-8	5/10/2018	NM	4.0	ND	NM	--	--	
MW-8	5/22/2018	NM	3.78	ND	NM	--	--	
MW-8	7/26/2018	NM	3.11	ND	NM	--	--	
MW-9	4/6/2018	NM	7.39	ND	NM	--	--	
MW-9	4/12/2018	NM	7.68	ND	NM	--	--	
MW-9	5/1/2018	NM	7.4	ND	NM	--	--	
MW-9	5/10/2018	NM	7.59	ND	NM	--	--	
MW-9	5/22/2018	NM	7.38	ND	NM	--	--	
MW-9	7/26/2018	NM	6.71	ND	NM	--	--	
MW-16	7/26/2018	NM	15.17	ND	NM	--	--	
MW-17	7/26/2018	NM	14.95	ND	NM	--	--	

**Notes:**

DTW - Depth to Water

DTP - Depth to Product

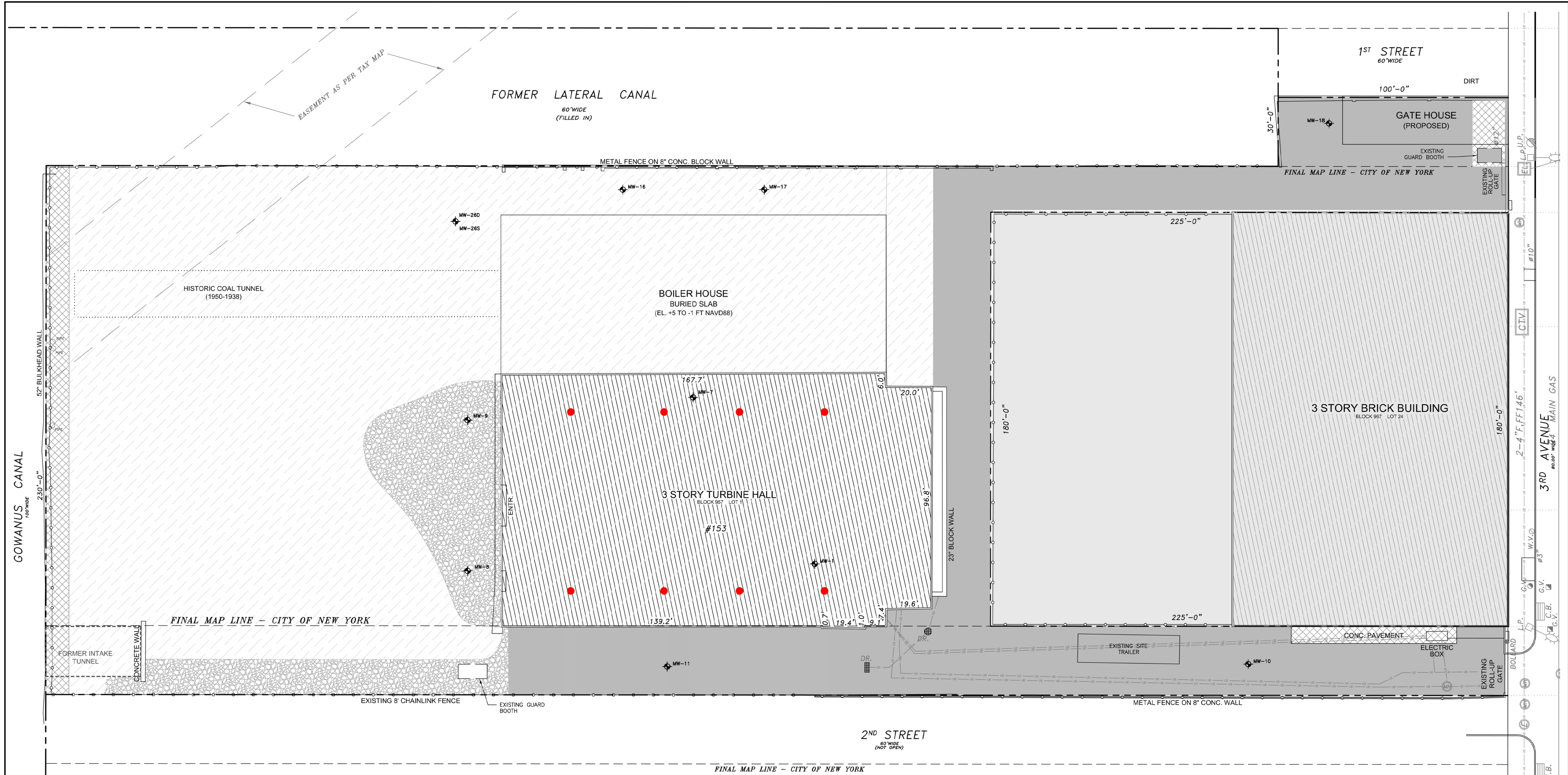
***Second Quarter 2018 Progress Report  
March 30 through July 31, 2018  
BRT Powerhouse Site***

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**FIGURE**

1. Site Plan
2. Turbine Hall Sand Leveling Course PCB Concentrations





LEGEND	
	EXISTING BUILDING OR STRUCTURE
	PROPERTY LINE
	FENCE LINE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING STORM WATER SEWER
	EXISTING MANHOLE
	EXISTING STORM WATER DRYWELL
	APPROXIMATE LOCATION OF POTENTIAL HISTORICAL SUMP
	LOCATION AND DESIGNATION OF MONITORING WELL INSTALLED BY LBG
	ASPHALT CAP
	CLEAN STONE
	EXISTING CONCRETE SLAB
	RECYCLED CONCRETE AGGREGATE

NOTE  
BASE MAP PREPARED FROM SURVEY PERFORMED BY PERFECT POINT LAND SURVEYING, RT, JANUARY 2017.



NO.	DATE	REVISION DESCRIPTION	INT.

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PROJ. ENGINEER: C.M.	DRAWN BY: B.H.C.
DESIGNED BY: J.K.	CHECKED BY: C.P.
DRAWING SCALE: AS SHOWN	PLOT SCALE: 1:1
DRAWING DATE: 10AUG18	PRINT TYPE: COLOR
OFFICE: NY	PAPER SIZE: ARCH D
PROJECT NO.: 2705.0001Y000	
DRAWING FILE: 2705.0001Y230.01.DWG	

**ROUX**  
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209 SHAFTER STREET, ISLANDIA, NEW YORK 11746  
(631) 232-2800

PROJECT NAME:  
**SECOND QUARTER 2018 PROGRESS REPORT  
GOWANUS VILLAGE I, LLC - BROOKLYN, NEW YORK**  
PROJECT FOR:  
**BRT POWERHOUSE LLC**

TITLE:  
**SITE PLAN**  
  
FIGURE  
1 OF 2



V:\CAD\PROJECTS\2705\0001\230\2705.0001Y230.02.DWG

LC-4-NE	7/18/2018
ft. b/s	0-2
PCBs	2.6

LC-4	7/12/2018
ft. b/s	0-2
PCBs	19,000

LC-2	7/17/2018
ft. b/s	0-2
PCBs	140

LC-3	7/17/2018
ft. b/s	0-2
PCBs	7.3

LC-4-E	7/18/2018
ft. b/s	0-2
PCBs	11

LC-4-SE	7/18/2018
ft. b/s	0-2
PCBs	13

LC-1a	7/12/2018
ft. b/s	0-2
PCBs	150

LC-1a-W	7/18/2018
ft. b/s	0-2
PCBs	32

LC-1b	7/12/2018
ft. b/s	0-2
PCBs	5.7

LC-1c	7/12/2018
ft. b/s	0-2
PCBs	180

LC-1d	7/12/2018
ft. b/s	0-2
PCBs	8.7

LC-1e	7/12/2018
ft. b/s	0-2
PCBs	4.3

LC-1	7/12/2018
ft. b/s	0-2
PCBs	390

NOTE

BASE MAP PREPARED FROM SURVEY  
PERFORMED BY PERFECT POINT LAND  
SURVEYING, RT, JANUARY 2017.

DATA BOX KEY

SAMPLE LOCATION	SAMPLE DATE
LC-1b	7/12/2018
ft. b/s	0-2
PCBs	5.7
PARAMETER	CONCENTRATION

LEGEND

- EXISTING BUILDING OR STRUCTURE
- EXISTING STORM WATER DRYWELL
- ASPHALT CAP
- CLEAN STONE
- RECYCLED CONCRETE
- SAND LEVELING COURSE GRID BOUNDARY
- LC-4 SAND LEVELING COURSE WASTE CHARACTERIZATION SAMPLE LOCATION AND DESIGNATION
- LC-4-NE SAND LEVELING COURSE DELINEATION SAMPLE LOCATION AND DESIGNATION
- 5-POINT COMPOSITE GRAB LOCATIONS

Parameter (Concentrations in mg/kg)	Standards* (mg/kg)	Standards** (mg/kg)
PCBs, Total	50	500

CONCENTRATIONS IN mg/kg

mg/kg - MILLIGRAMS PER KILOGRAM

\* - HAZARDOUS LEVELS

\*\* - HIGH-CONCENTRATION PCBs LEVEL

NYSDEC - NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION

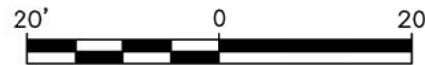
TSCA - TOXIC SUBSTANCES CONTROL ACT

PCBs - POLYCHLORINATED BIPHENYLS

ft b/s - FEET BELOW LAND SURFACE

RESULTS WITH GRAY BACKGROUND  
EXCEED TSCA HAZARDOUS LEVELS

RESULTS SHOWN IN RED EXCEED  
TSCA HIGH-CONCENTRATION PCB  
LEVELS AS DEFINED IN §761.123



Title:

TURBINE HALL  
SAND LEVELING COURSE  
PCB CONCENTRATIONS

GOWANUS VILLAGE I, LLC-BROOKLYN, NEW YORK

Prepared For:

BRT POWERHOUSE LLC

Compiled by: L.D.

Date: 10AUG18

FIGURE

Prepared by: B.H.C.

Scale: AS SHOWN

Project Mgr: C.P.

Project: 2705.0001Y002

File: 2705.0001Y230.02.DWG

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